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Federal Communications Commission

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Federal Communications Commission
Office of the Secretary

In the Matter of	)	Gen. Docket No. 90-314
	)	ET Docket No. 92-100
	)	
	)	RM-7140, RM-7175, RM-7617,
	)	RM-7618, RM-7760, RM-7782,
Amendment of the Commission's Rules to Establish New Personal Communications Services	)	RM-7860, RM-7977, RM-7978,
	)	RM-7979, RM-7980
	)	
	)	PP-35 through PP-40, PP-79
	)	through PP-85

COMMENTS OF AMSC SUBSIDIARY CORPORATION

AMSC Subsidiary Corporation ("AMSC"), by its attorneys, submits its Comments on the Notice of Proposed Rulemaking and Tentative Decision in the captioned proceeding, 7 FCC Rcd 5676 (1992) ("Notice"). As the licensee of the U.S. Mobile Satellite Service ("MSS") system,[1/] AMSC supports the allocation of additional spectrum for new communications technologies. In that regard, AMSC is particularly encouraged by the Commission's efforts to allocate 220 MHz for emerging communications technologies, including MSS.[2/] While AMSC generally supports

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1/ See Memorandum Opinion, Order and Authorization, Gen. Docket No. 84-1234, 4 FCC Rcd 6041 (1989), rev'd in part sub nom. Aeronautical Radio, Inc. v. FCC. 928 F.2d 428 (D.C. Cir. 1991). See also Tentative Decision, Gen. Docket No. 84-1234, 6 FCC Rcd 4900 (1991); Final Decision on Remand, Gen. Docket No. 84-1234, 7 FCC Rcd 266 (1992).

2/ See First Report and Order and Third Notice of Proposed Rulemaking, ET Docket No. 92-9, FCC 92-437 (October 16, 1992).

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the proposal in the Notice to allocate spectrum for terrestrial PCS technologies, AMSC is concerned that 5 MHz of the proposed PCS allocation (1970-1975 MHz) would render unusable for MSS a recent, valuable allocation of spectrum to MSS by the 1992 World Administrative Radio Conference ("WARC"). AMSC therefore proposes, as discussed in more detail below, that the same amount of spectrum be allocated for terrestrial PCS, but with one change in the bands specified in the Notice. AMSC also proposes that the Commission allocate at least 80 MHz of international MSS spectrum from the Emerging Technologies band for domestic MSS providers.

Background

A severe international shortage of MSS spectrum has constrained the development of domestic MSS and continues to be an impediment to the full development of the service. This stems largely from the need of MSS systems in the U.S. to coordinate their proposed use of the spectrum with foreign administrations that seek to operate MSS systems of their own in the same bands. International demand for MSS has skyrocketed. More than thirty different MSS systems worldwide operate or plan to operate in the 28 MHz of spectrum presently assigned to AMSC. As a result, while AMSC has taken great strides toward implementing its MSS system, AMSC's experience in the international coordination

process has shown that AMSC is unlikely to be able to gain access to as much spectrum as originally anticipated.[3/]

Due to this shortage, the U.S. took the lead in advocating substantial additional allocations of MSS spectrum at the 1992 WARC. As a result of the efforts of the U.S. delegation, the 1992 WARC allocated over 300 MHz of additional MSS spectrum internationally. See Addendum & Corrigendum to the Final Acts of the World Administrative Radio Conference (WARC-92) (1992).

The 1992 WARC, however, was only the first step. To be successful, the allocations made at the conference must be followed by the assignment of substantial blocks of this spectrum domestically. However, the additional MSS spectrum allocated at the 1992 WARC already has proven to be in high demand. A number of administrations -- including Canada and Inmarsat -- already have submitted Advance Publications to the International Frequency Registration Board for proposed MSS systems in newly allocated spectrum above 1 GHz. In addition, six U.S. entities, including AMSC, have proposed to use newly allocated spectrum to provide MSS via geostationary and non-geostationary satellites. Given the sharply increasing demand for MSS by providers in the

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3/ See, e.g., Comments of AMSC, ET Docket No. 92-9 (June 8, 1992); Petition of AMSC, ET Docket No. 92-28, RM-7806 (June 3, 1991); Comments of AMSC, Gen. Docket No. 89-554 (December 3, 1990); AMSC's Request for Modification and Supplemental Information, File Nos. 7/8/9-DSS-MP/ML-89 (December 27, 1989).

U.S. and other countries, the need to coordinate MSS spectrum with the many foreign governments that operate or propose to operate MSS systems of their own, and the constraints placed on the availability of this spectrum by the need to prevent interference, a substantial amount of the spectrum allocated internationally to MSS must be made available for use by U.S. MSS providers.[4/]

A number of the MSS allocations made at the 1992 WARC are within the 1850-1990 MHz, 2110-2150 MHz, and 2160-2200 MHz bands, which the Commission has allocated for the development of emerging communications technologies, including MSS. Specifically, the international MSS allocations within the Emerging Technologies bands are as follows:

1930-1970 MHz (Earth-to-space) (Region 2, secondary)
1970-1980 MHz (Earth-to-space) (Region 2, primary)
1980-1990 MHz (Earth-to-space) (Worldwide, primary)

2120-2150 MHz (space-to-Earth) (Region 2, secondary)
2160-2170 MHz (space-to-Earth) (Region 2, primary)
2170-2200 MHz (space-to-Earth) (Worldwide, primary)

The Notice in this proceeding proposes to allocate 110 MHz of the Emerging Technologies spectrum to PCS -- 90 MHz (1850-1895 MHz/1930-1975 MHz) to licensed PCS, and 20 MHz (1910-1930 MHz) to unlicensed PCS. While the Commission's definition of PCS -- "a

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4/ See Comments of AMSC, NTIA Docket No. 920532-2132 (November 6, 1992).

family of mobile or portable radio communications which could provide services to individuals and businesses, and be integrated with a variety of competing networks"[5/] -- encompasses MSS, it is clear that the Commission's allocation is for terrestrial-based PCS services. As it is generally infeasible at present for MSS to share spectrum with terrestrial PCS, the proposed PCS allocation would render 5 MHz of uplink spectrum allocated to MSS in Region 2 on a primary basis (1970-1975 MHz) unusable for MSS in the United States.[6/]

Discussion

In redeveloping 2 GHz spectrum for new communications technologies, the Commission must be careful to provide for the development of satellite-based mobile services as well as terrestrial services. With its ability to provide "mobile or portable radio communications" in areas unserved by terrestrial systems, Mobile Satellite Service is an important component of PCS, as presently envisioned by both the Commission and the international community at the 1992 WARC. MSS is particularly important in that terrestrial PCS largely will be limited to

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5/ Notice, 7 FCC Rcd at 5689, para. 29.

6/ The proposed PCS allocation also would render an additional 40 MHz of spectrum allocated to MSS in Region 2 (1930-1970 MHz) unusable for domestic MSS. The unavailability of this spectrum does not present as great a concern to AMSC as it is allocated to MSS on a secondary basis.

urban areas and small pockets of rural areas. The Commission's Notice recognizes that "world-wide PCS, i.e., fully-developed personal mobile communications . . . will require on-going multi-national coordination of . . . spectrum allocation, technical standards, and regulatory treatment of the panoply of services that this Commission has defined as PCS."[7/] It is therefore important that the Commission's spectrum policy for new mobile technologies foster the simultaneous development of terrestrial and satellite services, just as it did when considering spectrum allocations for MSS and terrestrial cellular at 800 MHz in the mid-1980's.[8/] Unlike then, however, it does not appear desirable or possible to accommodate MSS needs entirely in spectrum apart from the Emerging Technologies allocations.[9/]

7/ Notice, 7 FCC Rcd at 5732, para. 139.

8/ See Report and Order, Gen. Docket No. 84-1234, 2 FCC Rcd 1825 (1986).

9/ Indeed, it is essential to establish MSS allocations in close proximity to terrestrial PCS allocations in order to facilitate interoperability between satellite and terrestrial systems with common user terminals. See "Satellite Interworking with FPLMTS," Recommendation No. 4 (U.S. input to CCIR Working Party 8D) (December 6, 1991). Moreover, the other bands internationally allocated to MSS at WARC-92 are unlikely to meet domestic MSS spectrum requirements. Six U.S. applicants have applied for authority to operate MSS systems in the 1610-1626.5 MHz/2483.5-2500 MHz bands, and in addition a growing number of planned foreign MSS systems plan to operate in these bands. The Commission has not proposed to allocate the 1492-1525 MHz MSS downlink band domestically; thus, the 1675-1710 MHz MSS uplink band allocated at WARC-92 has no

(continued...)

AMSC's primary concern with the Commission's proposed PCS allocation lies in the fact that the allocation of the 1930-1975 MHz band would render unusable 5 MHz of the 1970-1980 MHz band, which was allocated by the WARC to MSS on a primary basis in Region 2. This also would render effectively unusable 5 MHz of the corresponding 2160-2170 MHz Region 2 primary MSS downlink band. The fact that these bands are allocated only in Region 2 makes this spectrum of particular value to the U.S. MSS system, because the 1980-2010 MHz/2170-2200 MHz bands are allocated to MSS on a worldwide basis and therefore are likely to be in high demand by MSS systems serving areas outside the U.S.

AMSC therefore proposes an allocation plan that would provide an ample amount of spectrum for the development of terrestrial PCS, while preserving the primary MSS allocations made at WARC-92 for domestic MSS use. AMSC proposes the following plan:

1. Allocate the 1850-1895 MHz, 1930-1960 MHz, and 2110-2125 MHz bands to licensed terrestrial PCS, as follows:

Channel Block A: 1850-1865/1930-1945 MHz;
Channel Block B: 1865-1880/1945-1960 MHz;
Channel Block C: 1880-1895/2110-2125 MHz.

9/(...continued)
apparent matching downlink band. The 2500-2520 MHz/2675-2695 MHz MSS allocations are being developed domestically for MMDS and ITFS, and are not expected to be made available for MSS in the near future.

This proposed allocation makes only one change in the channelization plan proposed in the Notice: one of the 15 MHz pairs in Channel Block C would be located at 2110-2125 MHz rather than 1960-1975 MHz. The 2110-2125 MHz band is spectrum that the Commission also has allocated for emerging technologies. Other than this single modification, AMSC's plan involves the same frequency allocations for terrestrial PCS as those set forth in the Notice. Moreover, AMSC's proposed frequency block pairing, like that proposed by the Commission, would retain at least an 80 MHz separation between transmit and receive frequencues, consistent with the existing microwave channelization plan.

2. Retain the proposed allocation of the 1910-1930 MHz band for unlicensed PCS.

3. Take immediate action to allocate the 1970-2010 MHz (Earth-to-space)/2160-2200 MHz (space-to-Earth) bands to MSS.

4. Allocate the 1960-1970 MHz (Earth-to-space) and 2125-2150 MHz (space-to-Earth) bands as reserve spectrum for MSS.

The benefits of this proposal are manifest. First, AMSC's plan would maintain the 110 MHz of spectrum the Commission determined to be necessary for the development of terrestrial PCS, with only one change to the plan set forth in the Notice. At the same time, AMSC's plan would make available for domestic use 80 MHz of spectrum allocated to MSS on a primary basis at the 1992 WARC. 20 MHz of this spectrum (1970-1980 MHz/ 2160-2170

MHz) is allocated in Region 2 only and therefore is of particular value to a U.S. MSS system.[10/] The 1980-2010 MHz/2170-2200 MHz worldwide bands are also of great importance because they can alleviate the worldwide congestion of MSS spectrum, and portions of these bands could serve as additional spectrum for a U.S. MSS system. In addition, the 1960-1970 MHz (Earth-to-space) and 2125-2150 MHz (space-to-Earth) bands, which the WARC allocated to MSS in Region 2 on a secondary basis, would serve as a reserve for meeting the need of a U.S. MSS system for additional uplink and downlink spectrum. This additional spectrum would be in full conformance with WARC allocations and would do much to alleviate the urgent need for additional spectrum for MSS in the U.S. and throughout the world.

Conclusion

AMSC urges the Commission to adopt the allocation plan set forth in these comments. The plan preserves sufficient spectrum for the development of terrestrial PCS. At the same time, it

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10/ The primary MSS allocations in the 1970-2010 MHz and 2160-2200 MHz bands will be available worldwide in the year 2005, and in the U.S. on January 1, 1996. See RR 746U. However, the U.S. objected to the worldwide limitations and reserved the right to use the bands at any time to meet MSS needs. See Declaration 67, WARC-92 Document 389-E (March 3, 1992), at 29. Moreover, the 2005 worldwide implementation date is likely to be revisited at a future WARC, and the early implementation of these MSS allocations in the U.S. will encourage early utilization of this spectrum by the rest of the world.

helps to alleviate the chronic shortage of MSS spectrum, thereby spurring the simultaneous development of mobile satellite communications in the U.S.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Valerie A. Mack, a secretary in the law firm of Fisher, Wayland, Cooper & Leader, do hereby certify a true copy of the foregoing "Comments of AMSC Subsidiary Corporation" was sent this 9th day of November, 1992, by hand delivery, to the following:

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